EDUCATIONAL WORK
IN GRAIN MARKETING
in
1952

U. S. DEPARTMENT OF AGRICULTURE
Extension Service
Division of Agricultural Economics

November 1953

UNITED STATES DEPARTMENT OF AGRICULTURE
Extension Service
Washington 25, D. C.

EDUCATIONAL WORK IN GRAIN MARKETING IN 1952 1/

Foreword

In 1952 educational work on grain marketing was reported by 31 States. This report is the same type as the one issued in February 1953, "Making an Extension Grain Marketing Program Effective." The kinds of educational work covered in this report are substantially the same as in the previous one. However, in most instances the illustrations and work reported are for different States.

The report is mainly a presentation of the work being done in different States. No effort has been made to evaluate the relative importance of different lines of activity. The purpose here is to give a picture of what is going on in grain marketing education over the country.

Those who may be interested in more detailed information on a particular State program or activity will find it helpful to write directly to the State program leader. State extension workers active in grain marketing education are listed on page 32 of this report.

CONTENTS

1/ Prepared by W. B. Combs, Extension Grain Marketing Specialist, General Crops Section, Division of Agricultural Economics, from State Extension Reports, November 1953.

1175(11-53)

INTRODUCTION

The term "grain marketing" herein is used to include educational and demonstrational work on all of the important grain and oilseed crops - wheat, barley, rye, oats, corn, sorghum, soybeans, flaxseed, rice, and seed crops. Extension's purpose in doing educational work on the marketing of these commodities is to help improve efficiency of handling; eliminate waste and spoilage; maintain quality; develop the proper use of price differentials according to quality, type of product and supply and demand; encourage improved methods in storing, handling, processing and transporting grain; expand and develop market outlets and new uses; aid producers, handlers, processors, retailers, wholesalers and consumers to better understand market functions and to improve distribution and utilization of grain, grain products and seed crops.

These objectives do not specify all of the details involved in a grain marketing educational program. It should be understood that no one State may be carrying on work dealing with all of the purposes listed. There is no model educational program on grain and seed marketing. Each State has developed its program in line with the problems, needs, interest of different groups, and available funds and personnel. While there are threads of uniformity among the States there are also variations from area to area and community to community, depending upon the local intensity of the problems and available resources for dealing with them. In this report an effort is made to present the various programs and activities receiving current attention by a number of State Extension Services.

ESTABLISHING MARKETING PROGRAMS

How to get started on a good grain marketing educational program is an important problem for those States interested in establishing a program. There are many ways that the job may be done. The 1952 report from Oregon contains a section on getting established in marketing which will be of interest:

"Beginning about 1920 the seasoned Extension agent upon drawing a strange county lay down these five guides for getting established:

1. No speeches, yet.
2. Take inventory of the agricultural plant.
3. Ascertain why the development occurred as it did; get at root causes.
4. Identify those who have done well on the same land for 25 years.
5. Take counsel with these men on needs and means of meeting them.

"From this open minded, analytical approach has stemmed a phenomenally successful program and service of agricultural production betterment.

"For 39 years the Extension Service has had the responsibility, and presumably the opportunity, for a comparable service with distribution. There are many excellent examples of effective marketing service, but the development thereof has lagged heavily. Marketing service appears to be at about the stage of production service in 1920.

"What are the steps needed ultimately to bring marketing services to a par with those of production? Are they not substantially those of the county worker of 1920?

First: The open mind.
Second: Inventory of distribution resources, including the parts, the interrelationships, and the costs in detail.
Third: Determine the reasons for development of the marketing methods in use; get at the roots of things.
Fourth: Identify leadership in the distributing trades.
Fifth: Take counsel with that leadership on needs and program, just as has been done with farmers.

"Is that not all there is to it?"

TRAINING PROGRAMS

The increased need and demand for more educational work on grain marketing during the past few years has called for a stepped up personnel training program. Since the people involved do not have time to engage in formal classroom work, it is necessary to accomplish this as an in-service or on the job function. The training programs are usually accomplished through group conferences, tours, workshops, or individual worker effort.

A number of extension marketing specialists are taking graduate work in economics, marketing and related subjects at different colleges and universities. Some specialists are doing part-time research. A number of States feel that joint employment of personnel to do both research and educational work is an excellent approach. The advantage of this method is that there is a minimum of lag in time between research findings and extension work on the subject.

Extension Personnel Training.

Iowa. Beginning July 1, 1952, the project was reduced to half-time of one specialist, with the specialist devoting half-time to grain marketing research. This change was made at the suggestion of those directly concerned with the project for the following reasons: (1) research results were lacking on many of the most important grain marketing problems, (2) trade groups tend to be more responsive to educational programs of the specialist if he is also doing research on problems of direct concern to them, and (3) the grain trade is well organized in Iowa, so that handlers can be effectively reached with a minimum of specialist time through their various trade associations.

Many of the surplus grain producing States have held marketing conferences for county agents. These are essential steps in carrying the grain marketing program to the counties. Minnesota reports a 2-day grain marketing conference to which county agents from 25 counties were invited. Others in attendance included respresentatives from crop improvement associations, agricultural representatives from railroad companies, the Minnesota Grain Exchange, and extension specialists in agronomy, engineering, entomology, plant pathology, and one elevator operator. The purpose of the conference was to give the agricultural agents a comprehensive picture of current grain marketing problem areas with which they could be helpful in solving. The program featured included the following numbers:

Conference opened by Director P. E. Miller.

"Farm Income From Sale of Crops" - S. B. Cleland
Extension Farm Management
"Factors Influencing Keeping Quality of Grain" -
Dr. Clyde Christensen, Professor of Plant Pathology

"Grain Drying and Problems Associated with this Practice on the Farm and at the Elevator" - John Strait, Associate Professor, Agricultural Engineering, Dennis Ryan, Extension Engineer, Dr. L. A. Cuendent, Assistant Professor of Biochemistry.

Lunch - Cafeteria Grain Terminal Association and Review of their operations.

Panel: Subject - "Local Problems in Marketing Grain and Efforts to Overcome Them" - Leo Lester, Manager, Farmers' Cooperative Elevator of Worthington, Henry O. Putnam, Executive Secretary, Northwest Crop Improvement Association, Ross Huntsinger, Nobles County Agricultural Agent, A. J. Lejeune, Agronomist, Midwest Barley Improvement Association, Harold C. Pederson, Extension Economist in Marketing.

"Rodent and Insect Damage, and Efforts Underway to Prevent Losses from these Causes" - The law as it relates to these items will also be discussed. T. L. Aamodt, State Entomologist.

Movie on rodent control - H. L. Parten, Extension Entomologist.

"Plans for Tomorrow" - George Wilkens, Assistant Secretary, Minneapolis Grain Exchange.

Second Day:

"Grain Marketing Today" - George Wilkins.
"The Futures Market" - M. J. Laurel.
"The Cash Grain Market and the Commission Company" - J. D. McCaull.

Groups of about six each will visit the cash markets and futures market.

Lunch - Grain Exchange Dining Room (during lunch hour some may wish to visit the State Inspection Department.)

"How Does a Professor Use The Grain Exchange?" - W. I. Nightingale.

Special problems in marketing 1951 Grain Crop. Carload samples taken from market will be available for study. Also colored slides.

Summary and Discussion - Led by D. C. Dvoracek.

Agents responded favorably from this meeting with comments like this:

"This was a good session. We should have more like this one."

"I am going to organize a group of farmers to visit the market next fall." (Such a tour was later scheduled for December 2, 1952)

"I want a number on Grain Sanitation for our Crop Show next winter." (Three are scheduled for winter of '52)

"Couldn't we have something like this for our young farmers back in our country?" (Eight such meetings were scheduled for November 1952)

The elevator operator who attended said, "We can get more information across at a meeting of this kind than we can at an elevator meeting of stockholders."

A railroad development agent said, "We just don't understand our markets. Be sure to include me on your list when another meeting like this is held."

The representative of the malters said, "I was glad to be present for the two days and receive the information regarding the true functions of the market and also to answer some of the questions which come up about malting barley."

This training session for county agents suggests the value of undertaking some project similar to this one each year.

Similar training programs for county agents have been carried on in Illinois, Ohio, Montana, and many other States.

Regional Conferences of Extension People.

Occasionally marketing specialists are able to get together in regional conferences to discuss their mutual problems. Sometimes the conference covers a wide region and at other times only a few workers convene. Workers in the spring wheat area got together at Fargo this year and the hard red winter wheat people held a conference at Liberal, Kansas, in October. The following report of the Liberal conference is taken from the Nebraska report:

"A regional Hard Red Winter Wheat Conference was held at Liberal, Kansas, on October 6-7 with representatives from Kansas, Oklahoma, Texas, Colorado, and Nebraska. Also present were representatives of the USDA Extension Service, Mr. Willis B. Combs, Extension Grain Marketing Specialist from Chicago, and Mr. L. R. Paramore, Extension Marketing Specialist from Washington. Clayton Libeau, Extension Marketing Specialist, and L. F. Sheffield represented Nebraska at the conference.

"Principle purposes of the meeting were to discuss common problems in wheat and grain marketing in order to better coordinate activities among the States in the hard winter wheat region. Reports of grain marketing activities

carried on in each State were given and discussed. The meetings were highlighted by good discussions which pointed out that most problems are common to several States. Special efforts will be made to develop regional visual aid materials for use in each cooperating State. Mr. Edward Granstaff, Regional Marketing Specialist, stationed at Oklahoma A & M, is to aid in the interchange of ideas and development of materials suitable for use in the entire region.

"Since the meeting there has been considerable exchange of information and materials which will aid in the improvement of the grain marketing programs in all the States concerned. New publications and information are sent out as quickly as available by Mr. Paramore and Mr. Combs. These materials will greatly benefit the State leaders in these respective States in the ever-changing marketing field."

Producer and Industry Conferences.

Marketing conferences called to discuss specific problems have been held in a number of States. These conferences are called because the producer or some segment of the industry asks the Extension Service to help them with their problems. In Louisiana discussion meetings were called in the soybean producing areas; as a result soybean growers in the area took it upon themselves to get a hearing from the officials of the Port Authority on grades, moisture content and dockage. Conferences were held with the trade in Aroostock County, Maine, because of a surplus of oats in the county which was called a by-product of the potato industry. At these conferences the marketing of oats on grade and quality basis was stressed. A marketing clinic was held at Little Rock, Arkansas, and a barley clinic was planned for the Klamath Basin area in California and Oregon. Organization meetings of this kind to discuss marketing problems with producers and members of the trade is one of the most valuable contributions marketing specialists can make towards solving problems of the industry and getting understanding among producers, elevator companies, grain dealers and others.

GRAIN GRADING SCHOOLS

During 1952 the Federal extension grain grading specialist attended 75 grain grading schools for grain dealers in 15 States. The attendance was 4,391. Other schools were held, some of them organized by county agents, working with their local grain dealers. This last development is most encouraging. Grain grading schools in the States are organized by marketing specialists with very close cooperation with the inspection officials, both State and Federal, and with the organized grain trade. While the actual grading of grain by the people attending the meeting is the main

subject in the program, other subjects such as insect and rodent control, sanitation programs and adequate storage facilities are also important parts of these schools. The following States report rather intensive work on grain grading: Kansas, Louisiana, Maine, Ohio, Maryland, North Dakota, North Carolina, Missouri, Nebraska, Wyoming, Indiana. The Kansas specialists report on grain grading schools as follows:

"Eight grain grading schools were held within the State of Kansas through the cooperation of the State and Federal Grain Inspection Departments, Federal Extension Service, Kansas Grain Feed Seed Dealers Association, Kansas Wheat Improvement Association and the State Production Marketing Administration. Elevator operators, PMA bin inspectors, and county agents were invited to attend these schools. The State and Federal grain inspectors conducted the major portion of these schools. The various wheat kernel damages were reviewed and pointed out and then those in attendance actually graded samples received at these various Kansas inspection points. The major portion of the afternoon was used by the extension specialists in the discussion of the sanitation program of the Food and Drug Administration; this was of major interest to those in attendance due to the recent initiation of this regulatory measure.

"The host county agricultural agent made arrangements for the district meetings. It was necessary that they obtain rooms large enough to house 150 to 200 students. It was also necessary to select rooms with good available natural light for the purpose of grading the samples. The host agent made publicity available to those who were in his area."

Variety Analysis Training.

During the war years when there was a demand for all of the wheat that could be produced, a number of low quality varieties undesirable for milling and baking purposes were produced in considerable quantity. This soon resulted in a problem for flour millers and the bread baking trade. The difficulty was in the mixing of good and poor quality varieties. The only effective way to meet this problem is through a system of price differentials that will discourage the growing of undesirable varieties of wheat. To do this it was necessary to devise a means of detecting the extent of variety mixing for use in determining price discounts and price premiums.

One approach to the undesirable variety problem was through variety identification. This would permit terminal elevators, grain merchants and mills to determine the variety composition of carloads of wheat and to follow storage and handling practices designed to minimize the variety mixing problem. Through the use of variety identification some elevator

companies and grain buyers were able to offer premiums for superior milling and baking varieties. There was a growing interest in this work and a number of concerns began employing variety experts to analyze carlots from different buying stations and elevators.

This calls for highly trained experienced people to identify wheat kernels as to variety. Mr. E. L. Granstaff, former leader of the regional hard red winter wheat marketing, worked with the Southwestern States in developing a training program on variety analysis. The following excerpt from Mr. Granstaff's 1952 Annual Report indicates the nature of this phase of the program:

"Seventeen wheat variety analysis schools were held in the States of Kansas, Colorado, New Mexico, and Texas with approximately 600 individuals attending. These schools were for the purpose of teaching grain handlers and agricultural leaders how to identify wheat varieties by observing the kernel of wheat; and as a result of this make it possible for these leaders and grain dealers to do a more efficient job in education and in the marketing of high quality milling and baking wheat.

"One of the latest and more popular activities now in existence is a program designed to keep those individuals doing wheat variety work for mills and elevators in close agreement. It consists of sending one sample per month to the analyst of each grain concern for this analysis. He then returns his results to the originator who reports the correct analysis. Each sample consists of 100 kernels of known varietal composition. At the present time 40 individuals representing mills and terminal elevators from the States of Kansas, Oklahoma, Texas, and Colorado are participating."

The hard red winter wheat educational program is tied very closely to research in the area and for the past two years a hard red winter wheat institute has been held at Stillwater at which the latest research findings have been presented and training has been given in wheat kernel analysis.

GRAIN SANITATION PROGRAMS

Almost without exception educational work on the Food and Drug Administration program for grain was carried on in every State. The methods used extend from radio and news releases to a large number of meetings and demonstrations. Although the announced enforcement program was withdrawn before its effective date, the need for educational work is just as urgent as ever. Every grain farm and every grain elevator should have an up-to-date grain sanitation program for the control of insects, rodents and birds. The 15-man committee appointed

by the Secretary of Agriculture to study the question has already reported that the educational program should be strengthened and continued. Because of the length, it would be impossible to report on this work in every State but the following report from Oklahoma is typical of what was done in the area:

"An Oklahoma Committee on Grain Sanitation was organized. This committee represented all segments of the industry, including representatives of cooperative organizations, as well as the independent and line operators. Grain Marketing Advisory Committees previously organized on a county level were also used. A packet of material, outlining a detailed step by step procedure to be used by County Agents carrying out a grain sanitation program was prepared. The material in this packet consisted of the following:

a. Suggested calendar for grain sanitation demonstrations.
b. National grain sanitation program.
c. Losses and contamination of grain in farm storage.
d. How to kill rats with Warfarin.
e. How to protect farm stored wheat.
f. How to fumigate a wheat bin.

"The Extension Entomologist was requested to prepare two bulletins on this subject, "How to Protect Farm Stored Wheat" and "How to Kill Rats With Warfarin." Twenty-five thousand each of these two bulletins were printed. About 50 new 2x2 slides on this subject were prepared. Several large posters were also prepared.

"Fifty-nine grain sanitation meetings were held with producers, country and terminal elevator operators, and millers. More than twelve thousand persons attended these meetings. The Oklahoma Grain Sanitation Committee inform us they are highly pleased with the contribution of the Extension Service in the educational work related to the Food and Drug Administration grain sanitation program.

"Many complimentary letters have been received from the trade as well as producers about the contribution of the Extension Service in assisting with the program. The following are two examples.

"This is an excerpt from a letter sent to the 87 grain elevator members of the Farmers Cooperative Grain Dealers Association of Oklahoma by their Executive Secretary. This organization handles the bulk of the wheat produced in Oklahoma and parts of the Texas Panhandle.

> April 8, 1952 --- "We are glad to advise that we have the fullest cooperation of the Oklahoma Extension Service. --- Representatives of the Extension Service are doing a wonderful job. Complete information relative to the Food and Drug Administration campaign has been

placed in the hands of every County Agent, therefore the County Agent has the necessary information so that he can guide the farmer in the proper cleaning and fumigating of the bins before wheat is placed in them. In addition, they have the information that is necessary for the wheat to be fumigated within a short time after it is placed in the bin.

In addition to the above, State Extension workers will be glad to get several County Agents together and hold demonstrations out on the farm, demonstrating the step by step procedure to place farm bins in proper condition. We urgently suggest that you get in touch with your local County Agent and work with him closely in connection with this program and possibly a demonstration as outlined above can be held in your community."

"This is an excerpt from a letter received from one of the large millers in Oklahoma concerning a grain sanitation demonstration he attended in a community in which he operates.

May 16, 1952 --- "You are a couple of swell fellows and I appreciate very much what you are doing and the fine way you do it. You really showed the boys the real 'McCoy' today, and I know every farmer who witnessed the job done will be very much behind the program that you presented. I hope every community can have the benefit of seeing their problem so that they too can clean up and at the same time save themselves, in each community, thousands of dollars. If you boys could only collect one percent of the savings you are going to make them, you would be rich."

"All segments of the grain trade cooperated with one another in making these programs a success.

"Grain elevator operators are devoting considerable time and money to meet the new conditions requested by the Food and Drug Administration. Revolutionary changes are being made in handling grain. Farmers are reported to be cleaning up their bins and treating them as never before. More interest is being shown in killing rats, protecting food grains from contamination by birds, chickens, etc.

"A survey of pesticide dealers in Oklahoma shows a phenomenal increase in the use of insecticides to control stored grain insects.

"An average increase of 300 percent is reported in the use of fumigants on stored grains. Another practice used to a limited extent prior to 1952 - spraying the walls of grain bins prior to placing grain in them - is reported by chemical dealers to have increased 100 to 1 over previous years. Corresponding increases in the use of poisons to control rodents are also reported.

"Since rodents and stored grain insects destroy an estimated $15,000,000 of grain in Oklahoma each year, the adoption of the above practices have resulted in savings of hundreds of thousands of dollars to farmers and grain dealers during 1952."

GRAIN STORAGE

Extension work in grain storage, both research and educational, was carried on in Illinois, Georgia, Delaware, Alabama, Virginia, Montana, North Carolina, Kansas, and no doubt many others not covered in the marketing specialists' reports. Storage seems to be a number one problem in grain marketing in a number of areas. The subject not only covers the selection and building of the structure but also the care of the grain after it is stored. In a number of States farm storage is being studied to show the reasons why farmers stored grain on farms and whether or not any price gains were made by the operation. From historical price records it is often possible to show that it has paid well to store grain on the farm. This is especially true in those years when prices advance significantly after the harvest season or other unusual conditions exist. Many farmers believe that the gains have paid for the structure in 2 years. However, there is always the danger of deterioration of the grain in storage and in many States farm drying of grains is being tried. Also, the cost of farm storage should be considered in relation to the cost and availability of commercial storage. At first the driers were home built, but many farmers are turning to commercial models at the present time.

Building Plans.

Plans for storage structures for small grains and shelled corn are available from the University of Georgia. These farm structures consider especially insect and rodent control. The bins are 550, 1,800, and 4,000 bushel capacity. A bulletin on elevator construction has been issued and copies are available from the Agricultural Engineering Division of the University of Georgia at Athens. These plans for commercial storage in the area provide for a space for sidelines such as feed mixing or farm supplies. The plans include a drier because of the humid weather in the South. Most States have similar publications.

Grain Spoilage.

The spoilage of grain in storage has been a part of the educational program in many States. The Illinois Extension Service uses as subject matter a paper entitled "What Causes Grain to Spoil" by Dr. McMasters, Chemist of the Northern Research Laboratory. This is a comprehensive paper on the subject and copies may be obtained from L. F. Stice, Department of Agricultural Economics, University of Illinois, College of Agriculture, Urbana, Ill. Kansas and Minnesota also have published excellent papers on the same subject.

Under many circumstances it is good farm management practice for a farmer to have enough space to store his entire grain crop. Whether to store or whether to sell is a decision every farmer must make but there are many instances where it could be pointed out that it would be most advantageous to the farmer and to the industry if grain could be held on the farm in satisfactory storage until such time as it could be marketed to the best advantage. The following news item "Farm Storage is the Answer" is found in the Montana report:

"My storage space is the best investment I have on the place." This is the response of several farmers recently to the question, "Does it pay to build storage?"

"They gave several reasons for their enthusiasm concerning farm storage. Foremost is that with most farms now equipped with combines, the elevators simply can't handle the grain as fast as it is harvested. In many Montana towns, two or three days of good harvesting weather will fill up all the available elevator space.

"There is some tendancy to blame the congestion of elevators on unsatisfactory distribution of railroad cars. There may be room for improvement in car distribution, but we may as well face it - there just aren't going to be enough railroad cars to move a good grain crop as fast as it can now be harvested. Elevator men say that even if the grain could be loaded into cars, there aren't enough facilities at terminal points to handle it as fast as it now comes in.

"The answer seems to be for the farmer to provide plenty of good farm storage facilities. Of course, grain can be piled on the ground some years with very little loss in Montana. But sooner or later this method is likely to result in a mess.

"Never again" says one farmer. "I piled wheat on the ground in the fall of 1950. It turned out to be a rainy fall and in order to save the wheat I pulled the loaded trucks through the mud to the highway with my tractor."

"Other reasons are given for the need for more farm storage. Some farmers say they want to keep some grain for reserve. "Wheat in the bin is better than money in the bank" said one Montana producer. "If I get the money, I spend it."

"Some farmers hold grain to spread out their annual returns and thereby equalize income taxes. Some mentioned the multiple purpose of certain types of structures, especially the quonset, which can serve as machine shed, work space, and livestock shelter, as well as for grain storage.

"Some farmers like to hold their grain and speculate on a price rise later in the year. Others store to hold their

high protein wheat on the farm and avoid mixing it at the elevator. And last, but not least, in a year like 1951 quite a large amount of grain had such high moisture content when harvested that elevators wouldn't accept it even if they had room."

ELEVATOR BUSINESS ANALYSIS

In several States the grain marketing specialist used the results of financial analysis study of country grain elevators made in their State. In a previous report on this subject (February 1953) a summary was made of the Ohio work.

The Illinois work is based on a study which is reported in a bulletin entitled "Business Analysis of Country Grain Elevators" (AE 2821 - August 27, 1951). Mr. L. F. Stice, Marketing Specialist, was joint author of this publication. The purpose of this study is well stated in the opening of the bulletin as follows:

> "Where do we stand? Members and supporters of athletic teams often ask themselves this question. Directors, managers, employees, owners, and patrons of a business do likewise. They want to know how successful their business is when compared with others."

The material was obtained by analyzing the financial statements of 158 firms. The study was presented in such a way that any firm may compare its operations with those of firms that are similar in organization and size. The bulletin contains a number of scatter-graphs showing the relationship between the percentage of grain in the total sales and the net returns of grain and merchandise sold, and the gross margins realized on corn, oats, soybeans and wheat in relation to the volume of sales. Bargraphs show the gross margins realized. On this subject the bulletin states:

> "The handling margin (sales price less purchase price) taken by a firm is usually determined by the degree of competition in a trade area. There will usually be opportunities for higher than average margins if the manager will keep in close enough contact with the market to get the highest price offered. If he can ship immediately, he may also be in a position to get a higher price. Margins are also higher in some areas with a considerable volume of retail sales or with special outlets (in some cases, trucker buyers). Firms that condition, dry, or blend grain likewise show higher margins."

A yardstick for expenses is given, together with the reasons for expense differences among firms. A tabulation of the managers' salaries is shown and the paragraph covers the subject "How Operation Expenses Can Be Reduced."

These reports were used in discussions at district meetings with grain dealers and in conferences with managers of farmer-owned and other grain companies. These conferences with directors and managers were rated as excellent teaching devices. The conferences were arranged by the county agents at the elevators. Each director and manager had been furnished with a copy of the report prior to the meeting. In the discussions the strong and weak points of the organization were pointed out. These conferences stimulated lively discussions and in some instances crystalized board action on operating problems. These problems as reported by Illinois marketing specialists on which action was taken were as follows:

"(1) Policies on accounts receivable; (2) requirements for membership and a member's responsibility in supplying capital; (3) financing programs to secure a better balance between capital stock and member reserves; and (4) additions or improvements in business services.

"The conferences also had general benefits. They demonstrated the importance and use to be made of accurate records and inventories, and complete audits. They provided an opportunity to make suggestions regarding sound cooperative organization and practice.

"After a meeting in Moultrie County the farm adviser, Paul Krows, wrote as follows: "One of the most helpful discussions on grain marketing we have attended was conducted by Leslie Stice with the Moultrie Grain Association Board of Directors. He had prepared an analysis on one of their past year's operations and discussed it in detail. This is a piece of extension work that will do a lot of good."

Elevator Bookkeeping.

Another assistance to country elevators given by Extension workers were the bookkeeping schools, one of which was held in Oklahoma and which is to be repeated in 1953 with special emphasis for grain elevators. This subject is also given attention in Texas and the marketing specialist reports on the project as follows:

"In 195 a project was started in which a study is being made of the methods of record keeping that are used in country elevator businesses in the wheat area of Texas. The purpose of this project is to develop a simplified and yet an accurate system of keeping elevator records so that the operators can keep an up to the minute account of the business. Such a purpose when fulfilled will allow the elevator man a better understanding of his current status, avoid inaccurate inventory records, lower losses due to extreme changes in the current markets and will help the elevator operator keep tab on grain going

out of condition. Due to unusually large percentage of elevators that do not have a satisfactory system of record keeping, the project is developing into a larger study than at first planned on. The different conditions in different elevators may require a somewhat different set of records for one elevator than for another in a different locality. During 1952, some fifty different elevator concerns have been contacted and many of these have submitted copies of their various record material. These records are being studied and an attempt is being made to combine all the desirable features of the different systems of record keeping into one system that will be applicable to as many of the businesses as possible. To date, a workable grain settlement sheet has been devised and is now being tried by several of the cooperating elevator concerns. Also a daily receipt record of incoming grain has been worked out and an inventory record of bulk grain has been devised. Other forms will be forthcoming as the project is further developed. It is felt that many of the serious shortages of grain and the damaged grain that resulted in 1951, causing several elevator concerns to go out of business, could have been prevented by proper record keeping material on all grain. It is believed that proper elevator records will materially help the elevator operators in keeping track of grain, his position in grain stocks, and should help prevent some businesses from folding. Such a possibility would in the end result in helping the economy of local grain communities, including the farmer as well as the grain dealer."

4-H CLUB WORK

There has been considerable expansion in the 4-H Club grain marketing projects during the year. While not a complete list, the reports include work done in Colorado, North Dakota, Idaho, Illinois and Texas.

The Illinois report contains mimeographed suggested activities and references. The purposes of the activity are as follows:

"1. To emphasize the importance of producing and marketing high-quality grains.
2. To learn how to sell these grains to best advantage.
3. To know how grains move from the producer to the consumer and the process through which prices are made.
4. To understand the two kinds of markets - the cash market and the futures market - and how they are related.

Requirements: To be eligible for this activity a member must:

1. Be enrolled in a regular crops project in his local club."

There are many activities suggested under the following headings:

1. Improving quality and yields.
2. Maintaining quality of grain in storage.
3. When to sell grains.
4. How grains move to market.
5. The futures market.
6. Interpretation of markets reports.

In the references are listed publications on the suggested activities.

Business Training.

Idaho reports list some good material on 4-H activity in off-the-farm business, a study outline and a survey report. The report also contains material on the 4-H Camp Achievement Award for organizing a co-op canteen, with charter, bylaws, record forms, and final summary of receipts and disbursements. The Idaho report also contains other material for vocational agricultural instructors.

Judging Contests and Leader Training.

Another well-rounded program for youth activity is given in the North Dakota report. The North Dakota program plan with other specialists in the college includes the following:

1. Agronomy Clinic and Judging Contest Activity for Northeastern North Dakota 4-H and FFA members, held at Park River during State Potato Show Week.

2. State Market Grain Judging Contest to be held at Valley City, March 3, during week of Winter Show.

3. Sub-district training meetings for county extension agents and Vo-Ag Instructors in early January.

4. Materials, lesson-demonstration outlines, and leader training of Burleigh County 4-H leaders as a trial experiment in having all agricultural 4-H Club members build their meeting programs in 1952-1953 around a major project in crops production and marketing. (Herbison-Widdifield)

5. Preparation of 4-H leader kits, containing materials for teaching crops marketing.

6. Minneapolis Grain Exchange sponsored trips for 4-H, adult and FFA achievement in grain marketing work to observe, first hand, operations of the public grain market in Minneapolis.

The Texas report describes a pattern of educational youth activity which is followed in many of the Southwestern States. The Texas report summarizes the work as follows:

"Again in 1952 the Extension Service in cooperation with the Texas-Oklahoma Wheat Improvement Association sponsored the 4-H Club and F.F.A. Wheat Improvement Contest. This program is designed to give young farm boys a better background on the need for good quality wheat varieties and proper management of a wheat farm project. Some 50 boys in 4-H Clubs and 30 boys in F.F.A. Chapters completed wheat improvement projects.

"The wheat harvested from each of these projects was submitted to the State wheat show at the Amarillo Tri-State Fair at which time the samples were graded and sent off for milling and baking tests. The boys receiving the highest score on their wheat project and on the quality of the sample submitted were given prizes financed by the Texas-Oklahoma Wheat Improvement Association. A 4-H Wheat King and a F.F.A. Wheat King were named for the State and each King along with two other 4-H and F.F.A. winners received a wheat marketing tour in Ft. Worth to give the boys a background in modern grain marketing procedure. A great many more boys would have finished the contest than did in 1952 if the crop as a whole had not been practically a failure due to drought and winter killing. A considerable number of the projects were wiped out due to these factors.

"Also a 4-H Club Grain Marketing Program sponsored financially by the Chicago Board of Trade was introduced into Texas this year and met with a considerable amount of interest and participation. The 4-H Club members taking part in this contest studied the marketing procedure of grain from the time it was harvested on the farm until it was processed for ultimate use by the consumer. In the case of wheat, two terminal wheat marketing tours were arranged for the 4-H Club members taking part in this contest. Some 60 boys and their adult leaders made these tours which gave them more background on their project in grain marketing. In addition to the terminal tours, the boys studied operation of local county elevator houses, local PMA Committee functions, local bank lending on C.C.C. warehouse receipts and were given opportunities to study the cash and futures markets. Two State winners have been selected in the 4-H Club project along with an adult leader and will be given an all expense paid trip to visit the Chicago Board of Trade in January, 1953. In addition to these all expense paid trips, the Chicago Board of Trade is giving a gold medallion to the top four participating 4-H Club members in each county working on the project.

"These two projects (wheat improvement and grain marketing) will definitely give a better understanding to the 4-H and F.F.A. boys of the necessity of planting high quality wheat varieties and a need for an understanding of the process of grain marketing."

4-H Grain Marketing Tours and Clinics.

Some of the best cooperators in the 4-H program has been the organized grain trade at terminal markets. These markets include Chicago, Minneapolis, Milwaukee, Fort Worth, Kansas City, Omaha, Enid, Denver and undoubtedly many more for which no reports are available. One was held in Chicago January 8-9, 1952, with the following participants:

Approximately 30 State and County Extension Agents from Colorado, Illinois, Indiana, Iowa, Kansas, Missouri, Oklahoma and Texas.

Two State-winning members from each State participating during 1951, namely, Colorado, Iowa and Kansas.

Representatives from the Chicago Board of Trade, U.S. Department of Agriculture, and National Committee on Boys and Girls Club Work.

The meeting was sponsored by the Chicago Board of Trade, the Cooperative Extension Service and the National Committee on Boys and Girls Club Work. A visit was made to the trading floor of the Board of Trade. The story of the market was presented in the visitors' theater and guided tours were taken to the various departments of the board and to brokerage houses. The afternoon session included a discussion by representatives of the grain trade in the milling, processing, and commission business with a question and answer period.

The second day was devoted to a conference and discussion on the 4-H grain marketing program with a summary presented at the close of the meeting. The afternoon was spent in touring the Glidden Soybean and Processing plant.

RADIO, TELEVISION AND TEACHING AIDS

Visual aids are required tools in doing educational work in the grain and seed marketing field. Most of the State extension services now have excellent visual aids departments. Art units are increasing in number as a means of enhancing visual materials. The expanding use of television is calling for more and better illustrative devices. A number of effective posters and new materials have been developed around the country. Some of the more recent items developed by the States are described as follows:

Rural Residence of Mr. Weevil.

The work on grain sanitation in Oklahoma pointed up the need for something to dramatize and attract attention to the need for controlling weevils in stored food grains, prevent contamination by rats and birds and to avoid other foreign materials that lower quality. The poster depicting the rural residence of Mr. Weevil was developed to fill this need. By animation,

Mr. Weevil is shown living in comfort amidst food aplenty inside of a kernel of wheat. A water fountain is included to show the availability of moisture and a sewage disposal system with no outside connections. This illustration forcefully emphasizes the problem that the Food and Drug Administration is concerned about in its efforts to improve sanitation in grain handling.

The poster was quickly picked up by trade magazines and has received both national and international distribution. It was also used as the basis for a 4-H demonstration of the Weevil House. In addition, it is being used effectively as a demonstration teaching device by many workers, including State extension grain marketing specialists and others.

Supply and Demand Scale.

The livestock marketing specialist in Oregon has prepared a new device for illustrative use in discussing balance of supply and demand factors. A large even balance has been constructed with demand factors on one end and supply factors on the other end. This device might well be adapted for use on grain commodities.

Talking Certified Seedbag.

This was used at an annual meeting in Alabama in a presentation of the agronomy work using a combination of visual aids, sound, music and narration. The narrations were prepared in advance and the skit rehearsed before the meeting. In one part of the presentation a certified bag was placed on the stage and by means of a concealed speaker the bag told the certified story. We quote from the report:

> "Bag of Seed Talks: (A speaker was concealed in the bag of seed and the narrator was behind a screen. This gave the effect of the bag of seed talking.) Unheralded, not in the halls of fame; recognized not in the splendor and glamour of our universe, I am just a plain old bag of seed. Yet, I hold the key to all life; yes, even to your life, for without me all plants would be no more and you too would soon perish from the earth.
>
> "In the development of your county plan of work won't you please recognize, therefore, my importance and the key position which I hold? And, too, I would not have you forget the Biblical statement, "Whatsoever a man soweth, that shall he also reap." We seed are not too different from you human beings; there are good seed and there are bad seed. Sow good seed - seed of recommended varieties and of high qualities - and we will do our part in returning to you a more bountiful harvest. Thank you."

Around this idea no doubt many of our marketing men will come up with such things as talking elevators, talking weevils, or wheat and barley kernels in which devices have been installed so they can tell their story on TV, at a group meeting or in an exhibit at fairs and conferences. The Kansas Wheat Improvement Association already has a publication entitled "Kernel Wheat Speaks." Perhaps at some future date we can hear the kernel's story in his own words instead of reading what he has to say in the published leaflet.

The Actionometer

Professor Leonard Schruben, of Kansas State College, has developed a mechanical device called an Actionometer for use in evaluating market information. This tool was made to help explain why the ratio of grain sorghum prices to corn prices was out of line in 1952.

The sample Actionometer shown in Figure 1 indicates when the price ratios of corn to grain sorghum are such as to favor feeding one or the other to dairy cows. It would appear that this type of chart may be adapted to marketing uses as well as how to apply market information in deciding on a farm production practice. For example, it might be used to show the relationship between the price of grain and the cost of storage as a basis for deciding whether to sell at harvest time or store for later sale.

A New Teaching Method

The following is taken from the West Virginia report and while it applies to another commodity no doubt with some changes it could be used effectively in grain marketing work.

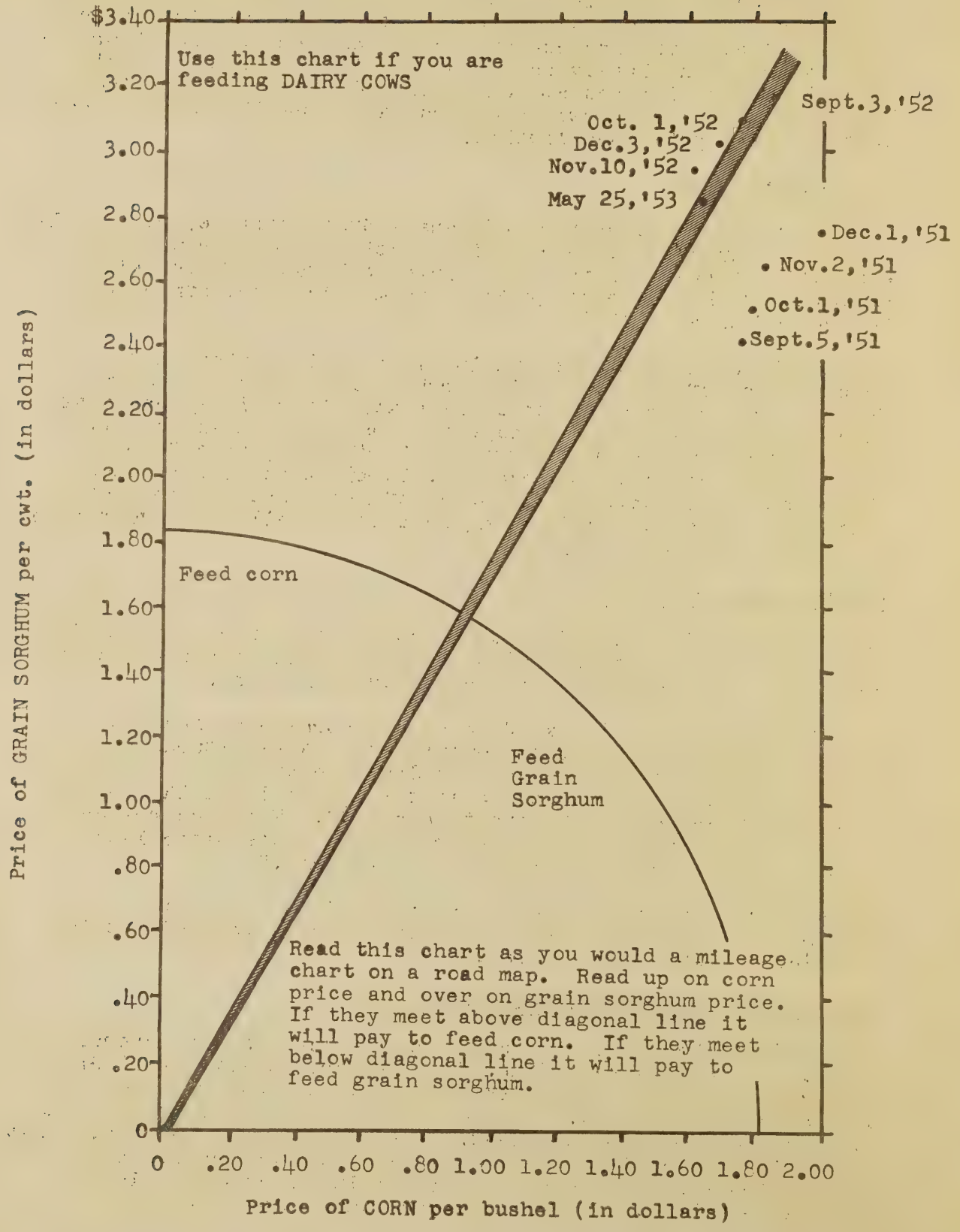
> "During the activities of an annual strawberry festival an official of the State Department of Agriculture was arrested by an official of the State Department of Labor. The arrest was made because less than the legal 24 ounces of strawberries to the quart were sold. This occurrence was to support an effort to bring up to date State laws on minimum legal weights of farm products."

The same specialist took his tape recording machine to Washington and interviewed officials there, later using this material in his radio program.

Illustrative Envelope Samples of Grain

This aid has been used in grain grading schools for several years. It was devised by Mr. Joe Elstner, Supervisor of Grain Inspection in the Kansas City district. He has prepared thousands of envelopes, each containing a known mixture of the various types of damaged wheat. These envelopes are used, first by showing the various types of damage on a screen or in a publication, and then each individual in the audience is given an envelope. Under the direction of the teacher a

Figure 1.



Relative Value of Corn and Grain Sorghum When Fed to Dairy Cows

separation of the various damaged types of wheat is made. This educational method was demonstrated in Kansas City by the Kansas marketing specialist before a national meeting of the chief grain inspectors and grain supervisors. Considerable time and skill are needed to prepare these envelopes, but in a number of States grain inspectors have undertaken preparation of these materials at the request of the marketing specialist and have used them in grain grading schools for country grain dealers.

Color Slides.

The use of 2x2 Kodachrome slides is increasing as an aid to illustrate marketing trends or desirable facilities. The Montana specialist has a set of slides showing farm storage bins which are recommended in the State. These slides, together with the information of the cost of construction and the usefulness of the bins to the farm operator, form the basis of a good farm storage discussion.

A recent check indicates that 222 copies of color slide films (C9-10-11) on grain inspection methods, types of damage, and wheat classes and varieties produced by the Federal Extension Service have been sold by the Photo Lab., Inc., of Washington, D.C. Most States have mounted some of the frames from these slides and used them in conjunction with local scenes. The color slide films from Photo Lab contain many close-up views of grain kernels and of laboratory equipment not generally available to State specialists. A few sets of these slide-films are available on a loan basis from W. B. Combs, 1108 Post Office Building, Chicago, Ill.

Radio and Television.

The radio is an accepted teaching method and is used widely by most marketing specialists and many county agents. TV programs are newer and undergoing rapid development. While charts can be so designed as to appear well on the TV screen, some of the best TV programs are based on so-called 3-dimension visual aids, some of which have been described in this report.

Color Printing.

Color printing is used to excellent advantage in the bulletin on wheat kernel damages compiled by the Kansas extension specialist and printed cooperatively by a number of the hard red winter wheat States. This bulletin is widely used at grain grading s chools and it has an advantage over Kodachrome slides in that the student can carry the picture with him when he leaves the class. The earlier publication "Wheat Varieties Commercially Important in The Hard Red Winter Wheat Area" is another good example of a color publication.

Acceptable visual aids are one of the greatest needs in the grain marketing program. State specialists are encouraged to canvass the field and report any promising aids that they may find to the Federal Extension Service for distribution to other States.

EVALUATION

One of the most difficult and also important parts of the reporting work in grain marketing is evaluation. In the 1952 reports there are comments from individuals or groups appraising the success of the marketing specialists' program. The comments in the Oklahoma report of the grain sanitation program, carried in that section of this report, are examples of evaluation based on opinions and comments from those with whom the work was done.

Statistics from nearby grain markets are also useful in showing whether or not quality improvements have been made. An interesting statistical table showing how the field work of the marketing specialist is matched at least 7 fold through the county agent system appears in the Montana report:

"Statistics on Marketing Work Performed
by County Agent & Home Demonstration Agents

Days spent by Agents on Marketing Problems	547.5
Days spent by Specialists assisting Agents	77.5
Office Calls on Marketing	1368.0
Telephone Calls on Marketing	1254.0
Home Visits	798.0
News Stories	380.0
Meetings	112
Attendance	4256
Radio Broadcasts	55
Circular Letters	28
Tours and Demonstrations	5
Total number of counties reporting activities in Marketing and Distribution	38"

It has been observed that county agents are doing more and more marketing work although it is sometimes difficult to show this through statistical records. The Colorado report indicates that Vernon Carter, county agent in Prowers County, delivered a talk in Denver before the Colorado Seed Growers Association annual meeting on this subject: "The Organization of a Marketing Program." One way to evaluate the effectiveness of the grain marketing extension program is to find out how much work in marketing is carried on by county agents in work which they themselves initiate and direct.

GRAIN ADVISORY COMMITTEES

Many States have a grain advisory committee to work with the Extension Service on grain marketing. These advisory committees are especially important when new work is being started. The selection of members of these committees should be carefully considered so that all the segments of the industry are represented, together with the producers, and through this contact all are made to feel that they have some responsibility in the marketing project. The State of Oklahoma has the

advisory committee system well set up. Montana has worked through rural progress conferences on which the farmers themselves suggest what the extension programs should cover in the field of grain marketing. One of the most recent advisory committees is being selected by the county agents in Tulelake, Calif., and Klamath Falls, Ore., to advise on an extension marketing program for Hannchen barley.

FIELDS OF FUTURE WORK

There are many fields in grain marketing educational work that have not been entered by Extension people and there are other fields in which only a beginning has been made. Practically no work has been reported with rice, and only a beginning with seed crops, protein testing, and the marketing of western barley.

County Agent Participation.

More material on grain marketing needs to be prepared for county agents use such as circular letters or leaflets. Delaware Extension Folder No. 30, "Corn: Store or Sell It" is an example.

As stated earlier, one of the measures of evaluation is the amount of marketing work that appears in the county agents' reports. A short meeting, scheduled well in advance, may make the marketing work more acceptable to the counties. Many of our county agents are favoring a short 2-hour session where it is hoped to get the participation of active farmers. In organizing district meetings, in which some training will be given to county agents, it is very helpful to have the date cleared with the administrators well in advance so that the training schedules appear on the county agent's calendar of work.

Records and Storage.

The record keeping for grain elevators reported in the section on business analysis should be considered by a number of States. Storage is also an important problem. Louisiana reports that it is a number one problem in rice production. North Carolina also states that grain storage is a top priority problem. With a surplus of grains such as we are now facing storage is an important problem in almost every State.

Premiums and Discounts.

More study and educational effort is needed on the problem of price premiums and discounts for grade and quality in grain marketing. This is a complex matter which requires cooperative effort on the part of producers, country elevators, grain merchants, terminal elevators and the processors of grain products. It will also be necessary for the Commodity Credit Corporation to relate its grain price support loans and purchases to premium and discount practices that may be

developed by the trade. Some progress is being made along this line in the case of wheat and barley. Individual dealers and companies are paying premiums for superior quality. In some instances protein content is a special factor in determining market price. This is, however, only a beginning. Much remains to be done through research, education and practical application to meet the premium and discount problem. The possibilities for improving grain marketing in this regard should be a real incentive.

Working With Other People.

The Oregon report mentions the need for identifying leadership in the distribution trades and taking council with that leadership on the needs and on the program to be undertaken. The National Grain Marketing System is highly organized. However, there are various groups of trade organizations in the system and effort should be made to contact all of them in the State and to give them an opportunity to participate in the educational program. There are also State and Federal officials with whom it is important to maintain contacts. These include the market news services, grain inspection departments, the officials in both State and county PMA offices that handle price support programs, teachers of vocational agriculture and those in charge of veteran training programs. (See the preceding section on grain advisory committees.)

Protein Testing.

The standard method of determining protein at the present time is to make a nitrogen determination. There are other quicker tests for measuring the quality and quantity of protein which does not always check exactly with the nitrogen determination but which many consider better measures of protein quality. These newer tests can be made quicker and can be applied at country points. Change-over to marketing by one of these newer tests may be difficult to accomplish but if it can be done it would be a great aid in the marketing of grain crops where protein is important. Marketing specialists should consider the possibility of introducing these newer tests in the grain marketing system at least on a trial basis. Further information can be secured from Dr. Lawrence Zelney, Grain Branch, Production and Marketing Administration, Washington, D. C.

Regional Work in Grain Marketing.

Grain marketing problems are not confined to State boundaries. The grain marketing structure has developed to fit the needs of the particular crops, volumes handled and market outlets. Elevator companies, grain merchants and processors are operating on a territory or national basis. Therefore, the problems must be dealt with on an industry-wide basis in cooperation with the various segments and members of the trade.

Several of the hard red winter wheat States who started new marketing projects under the Agricultural Marketing Act of 1946 recognized the need for a regional program, as well as State and local programs. Many of the problems could not be successfully attacked by States working individually. Oklahoma took the lead in proposing a regional program. This idea was well received by the other hard red winter wheat States. A project was developed and initiated in February 1950.

The regional program was developed and is conducted in close cooperation with the State Extension Services, producers, cooperatives and the grain trade. The problems on which the regional program is concentrated include:

Wheat Variety Analysis: This involves a new practice in purchasing wheat by mills, elevators and other buyers using variety composition as a measure of quality and as a basis for price premiums and discounts. The regional project leader has given major attention to developing teaching materials 1/ and conducting training programs to prepare trade and elevator personnel to accurately identify desirable and undesirable varieties and types of wheat for milling and baking purposes. Persons qualifying under these training programs were given certificates of merit. Recently a new phase of this work has been developed to insure uniformity and accuracy in wheat kernel identification. During 1952 there were 42 individuals representing mills and terminal elevators from Kansas, Texas, Oklahoma and Colorado participating in the program. A 1,000 kernel sample of known variety composition is sent to each analyst monthly for identification. A report is made back to the analyst showing his accuracy.

Regional Hard Red Winter Wheat Institute: Beginning in 1952 an industry conference was held at Oklahoma A & M College. The purpose of this Institute is to bring together trade and industry representatives to discuss wheat marketing and quality problems. Attention is also given to reviewing research and analyzing current problems needing educational assistance. In 1952 over 120 people attended the Institute.

Assistance in States: The regional project leader works in close cooperation with State grain marketing specialists and others working on grain marketing and related problems. Assistance is given to the States in holding grain grading schools, training on variety identification, grain sanitation and 4-H Club work.

Adjustments in Crop Acreages.

With the reduction in wheat acreage, and possibly in cotton, farmers will be choosing alternative enterprises for the acres

1/ Wheat Varieties Commercially Important in Hard Red Winter Wheat States. Illustrated in color. A set of 26 color slides produced and made available to States.

taken out of production of wheat and cotton. Marketing specialists can be helpful to farmers in making these decisions if they can give the producers some information on the commercial grades and market outlets for the alternative crops, such as barley, oats, rye, corn, grain sorghum or other commodities.

Other Important Fields of Work:

We are almost committed to continue the educational work in grain sanitation and a few surveys showing how effectively this program is reaching the farm and country elevators should be made. The youth programs are interesting fields of work and the leaders of youth programs will be very appreciative of subject matter material that can be prepared for their use.

We should ever be on the lookout for effective teaching aids, borrowing ideas freely from other fields where likely material appears. Good ideas are scarce and hence the supply of good teaching aids is limited.

The suggestion made in the February report for helping to establish inspection services at remote points has been well received and a number of places are now receiving official inspection services that were not available heretofore.

The writer of this report, with offices in Chicago, has been working on marketing grades and standards and the related problems of country grain dealers on a national basis for some 15 years and, as far as time and funds permit, will visit the States or assist the marketing specialist in other ways.

Reference Material Available on Request
Write W. B. Combs, Extension Service
1108 Post Office Building
Chicago 7, Illinois

1. Grain Grading Primer, Misc. Pub. 325, U.S.D.A.
   A reference for grain dealers, how grain is graded.
   List of addresses of grain inspector supervisors.
   (Rev. 1950)

2. Handbook of Official Grain Standards of the U.S.
   101 pp. illus. Production and Marketing Adm.,
   Grain Branch, Washington, D.C.

3. Grading Soft Red Winter Wheat at Country Points. AIS 33.
   Extension Service. Folder illus.

4. Eight Steps in Grading Soybeans. AIS 34.
   Extension Service. Folder illus.

5. Seven Questions to Ask When You Boy or Sell Shelled
   Corn by Grade. AIS 32. Folder illus.

6. Six Steps in Grading Flaxseed. AWI 37.
   Extension Service. Folder illus.

7. Ten Steps in Grading Grain Sorghum. AWI 36.
   Extension Service. Folder illus.

8. Wheat Grading at Country Points.
   (For Hard Red Winter and Hard Red Spring Classes)
   AWI 86. Extension Service. Folder illus.

9. 4-H Grain Grading Demonstrations. M. p. 62.
   Extension Service. 28 pp mimeo. (To be revised)

10. Annual Summaries of the Grading of Carload Receipts
    of Grain by Crop Years. 1943-1951.

    Wheat and Rye Summary
    Corn and Grain Sorghums Summary
    Oats and Barley Summary
    Soybeans and Flaxseed Summary

    Prepared jointly by the Commodity Exchange Authority,
    Extension Service, and the Production and Marketing
    Administration. Shows receipts by grade at important
    markets each State. Some early years no longer avail-
    able, except on loan basis.

11. Grade Charts - U.S. Standards for Grain.
    8x10 glossy prints for printer's use only, where States
    wish to duplicate the chart. Grade charts in quantities
    can be secured without charge from the Seedburo
    Equipment Co., 618-626 W. Jackson Blvd., Chicago, Ill.
    (Specify chart by title.) This company also has a
    series of lessons on grain grading suitable for
    vocational agriculture teachers and county agents.

Fourteen charts available as follows:

(a) Grade Requirements for Hard Red Spring Wheat.
(b) Grade Requirements for Durum and Red Durum Wheat.
(c) Grade Requirements for Hard Red Winter Wheat.
(d) Grade Requirements for Soft Red Winter Wheat.
(e) Grade Requirements for White Wheat.
(f) Special Grade Requirements for Wheat.
(g) Grade Requirements for Corn.
(h) Grade Requirements for Oats.
(i) Grade Requirements for Rye.
(j) Grade Requirements for Barley (Class I), and Black Barley (Class II).
(k) Grade Requirements for Western Barley.
(l) Grade Requirements for Grain Sorghums.
(m) Grade Requirements for Soybeans.
(n) Grade Requirements for Flaxseed.

Three additional rice charts for printers use available from W. B. Combs, as follows:

(1) Grade Requirements for Rough Rice.
(2) Grade Requirements for Brown Rice.
(3) Grade Requirements for Milled Rice.

These charts also have been printed on heavy cardboard with appropriate grading information on how to apply the standards. A set of these charts, with the exception of rice, may be obtained from the Grain and Feed Journals Consolidated, 141 West Jackson Boulevard, Chicago 4, Illinois, at a nominal charge.

12. The following materials available on request to Miss Alice Haggens, Educational Director, Chicago Board of Trade, Chicago, Illinois:

Marketing Grain Through a Grain Exchange.

Hedging Highlights - Facts about Price Insurance and Speculation in the Grain Exchange. (In quantity)

A Manual of Trading in Grain Futures and in Cash Grains on the Chicago Board of Trade.

13. Weekly Grain Review. Weekly Feed Review available on request to following offices of the Market Reporting Service, Production and Marketing Administration:

F. L. Lyons, 729 Appraisers Bldg., 630 Sansome Street, San Francisco, Calif.

R. C. Wright, 325 U.S. Court House, Kansas City, Mo.

W. R. Kuehn, 116 Federal Office Bldg., Minneapolis, Minn.

C. R. Richardson, 343 U.S. Court House, Portland 5, Ore.

14. Situation Reports, Bureau of Agricultural Economics, Washington, D, C.

(a) Wheat Situation (includes rye)
(b) Feed Situation (includes corn, oats, grain sorghums and barley)
(c) Fats and Oils Situation (includes soybeans, flaxseed and cottonseed)
(d) Fruit and Vegetable Situation (includes dry edible beans and peas)

15. Grain Market News and Statistical Report Weekly.
Thomas J. McGuire, Market News and Service Division,
Grain Branch, PMA,
U.S. Department of Agriculture,
Washington 25, D.C.

16. The Grain and Feed Dealers National Association, Merchants Exchange, St. Louis, Mo., issued a weekly news letter and most State grain dealer associations issue news bulletins to their membership and will include extension grain marketing specialists on their mailing lists on request.

17. Trade Publications:

Wall Street Journal (daily). Special regional editions at San Francisco, Dallas, and Chicago. The Chicago edition reports individual sales of grain in cars, on the cash market, by grade and grade factors. Dow Jones and Company, Inc., publishers, 44 Broad Street, New York, N.Y.

Grain and Feed Journals consolidated (semi-monthly)
Grain and Feed Journals consolidated, Inc., Publisher,
141 West Jackson Boulevard, Chicago 4, Ill.

Grain and Feed Review (monthly)
Managle Publishing Co., 404 S. Third Street,
Minneapolis 15, Minn.

Many others. For regional and commodity coverage on feed, grain, hay, flour milling and other cereals see Directory of Newspapers and Periodicals,
N. W. Ayer and Sons, Philadelphia, Pa.

STATE EXTENSION WORKERS ACTIVE IN GRAIN MARKETING WORK

Alabama
Ralph R. Jones

Arizona
T. M. Stubblefield

Arkansas
C. R. Moore

California
G. B. Alcorn

Colorado
Rodney Tucker

Connecticut
P. L. Putnam

Delaware
W. T. McAllister

Florida
E. W. Cake

Georgia
C. G. Garner

Idaho
R. W. Wilcox

Illinois
L. F. Stice

Indiana
J. C. Bottum

Iowa
Richard Phillips

Kansas
N. V. Whitehair

Kentucky
G. P. Summers

Louisiana
R. M. Grigsby

Maine
C. R. Eckstrom

Maryland
J. E. Mahoney

Massachusetts
E. W. Bell

Michigan
C. E. Prentice

Minnesota
H. C. Pederson

Mississippi
W. E. Jones

Missouri
J. M. Ragsdale

Montana
Bruce L. Brooks

Nebraska
Leslie Sheffield

Nevada
Howard Mason

New Hampshire
M. F. Abell

New Jersey
Frank V. Beck

New Mexico
C. R. Keaton

New York
M. C. Bond

North Carolina
John M. Curtis

North Dakota
H. W. Herbison

Ohio
L. E. Folsom

Oklahoma
James R. Enix

Oregon
R. H. Teal

Pennsylvania
R. B. Donaldson

Rhode Island
Fred Taylor

South Carolina
J. E. Youngblood

South Dakota
L. M. Bender

Tennessee
A. L. Jerdan

Texas
Fred T. Dines

Utah
Leon Michaelson

Vermont
T. M. Adams

Virginia
H. M. Love

Washington
S. Q. Hoobler

West Virginia
R. S. Boal

Wisconsin
John Kross

Wyoming
Earl Moncur

Hawaii
Ralph C. Elliott

Puerto Rico
Luis A. Suarez